

FOR UTILITY/DESIGN  
CIP/PCT NATIONAL/PLANT  
ORIGINAL/SUBSTITUTE/SUPPLEMENTAL  
DECLARATIONS

RULE 63 (37 C.F.R. 1.63)  
DECLARATION AND POWER OF ATTORNEY  
FOR PATENT APPLICATION  
IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

PW FORM

As a below named inventor, I hereby declare that my residence, post office address and citizenship are as stated below next to my name, and I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the **INVENTION ENTITLED: A FLIP-CHIP PACKAGE INTEGRATING OPTICAL AND ELECTRICAL DEVICES AND COUPLING TO A WAVEGUIDE ON A BOARD**

the specification of which (CHECK applicable BOX(ES))

X BOX(ES) → A. ☒ is attached hereto.  
B. ☐ was filed on \_\_\_\_\_ as U.S. Application No. \_\_\_\_\_ /  
C. ☐ was filed as PCT International Application No. PCT/ \_\_\_\_\_ / on \_\_\_\_\_  
and (if applicable to U.S. or PCT application) was amended on \_\_\_\_\_

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PRIOR FOREIGN APPLICATION(S) Number	Country	Day/MONTH/Year Filed	Date first Laid- open or Published	Date Patented or Granted	Priority NOT Claimed
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

And I hereby appoint Pillsbury Winthrop LLP, Intellectual Property Group, 725 S. Figueroa Street, Suite 2800, Los Angeles, CA 90017-5406, telephone number (213) 488-7100 (to whom all communications are to be directed), and the below-named persons (of the same address) individually and collectively my attorneys to prosecute this application and to transact all business in the Patent and Trademark Office connected therewith and with the resulting patent, and I hereby authorize them to delete names/numbers below of persons no longer with their firm and to act and rely on instructions from and communicate directly with the person/assignee/attorney/firm/organization who/which first sends/sent this case to them and by whom/which I hereby declare that I have consented after full disclosure to be represented unless/until I instruct the above firm and/or a below attorney in writing to the contrary.

G. Lloyd Knight	17698	David A. Jakopin	32995	Sean Fitzgerald	32027	James R. Thein	31710
George M. Sirilla	18221	Robert D. Anderson	33826	Leo V. Novakoski	37198	Peter Lam	44855
Alan K. Aldous	31905	Cynthia Thomas Faatz	39973	Mark Seeley	32299	Gene I. Su	45140
Jeffrey S. Draeger	41000	Charles A. Mirho	41199	Raymond J. Werner	34752	Seth Z. Kalson	40670
David J. Kaplan	41105	Kenneth M. Seddon	43105	Calvin E. Wells	43256	Naomi Obinato	39320
Thomas C. Reynolds	32488	Steven C. Stewart	33555	Evan Finkel	49059	Steven C. Skabrat	36279
Howard A. Skaist	36008	Thomas Raleigh Lane	42781	W. Patrick Bengtsson	32456	Robert G. Winkle	37474
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Charanjit Brahma	46574	Keyvan Davoudian	47520	James M. Wakely	48597	Joel B. German	48676

(1) INVENTOR'S SIGNATURE: Kishore Kumar Chakravorty Date: 5/21/02

	Kishore	K.	CHAKRAVORTY
	First	Middle Initial	Family Name
Residence	San Jose	California	USA
	City	State/Foreign Country	Country of Citizenship
Post Office Address	6407 Berwickshire Way		
(Include Zip Code)	95120		

(2) INVENTOR'S SIGNATURE: \_\_\_\_\_ Date: \_\_\_\_\_

	Johanna		SWAN
	First	Middle Initial	Family Name
Residence	Scottsdale	Arizona	USA
	City	State/Foreign Country	Country of Citizenship
Post Office Address	19815 N. 84 <sup>th</sup> Way		
(Include Zip Code)	85255		

FOR ADDITIONAL INVENTORS, "X" box ☐ and proceed on the attached page to list each additional inventor.

☐ See additional foreign priorities on attached page (incorporated herein by reference).

Atty. Dkt. No. PW 81674-249782

(M#)

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(1) INVENTOR'S SIGNATURE:

Date:

	Brandon	C.	BARNETT
	First	Middle Initial	Family Name
Residence	Beaverton	Oregon	USA
	City	State/Foreign Country	Country of Citizenship
Post Office Address	10620 SW Oriole Circle		
(Include Zip Code)	97007		

(2) INVENTOR'S SIGNATURE:

Date:

	Joseph	F.	AHADIAN
	First	Middle Initial	Family Name
Residence	Carlsbad	California	USA
	City	State/Foreign Country	Country of Citizenship
Post Office Address	2327 Paseo Saucedal		
(Include Zip Code)	92009		

(1) INVENTOR'S SIGNATURE:

Date:

	Thomas	P.	THOMAS
	First	Middle Initial	Family Name
Residence	Beaverton	Oregon	USA
	City	State/Foreign Country	Country of Citizenship
Post Office Address	17337 NW Gold Canyon Lane		
(Include Zip Code)	97006		

(2) INVENTOR'S SIGNATURE:

Date:

	Ian		YOUNG
	First	Middle Initial	Family Name
Residence	Portland	Oregon	Australia
	City	State/Foreign Country	Country of Citizenship
Post Office Address	3181 NW 114 <sup>th</sup> Terrace		
(Include Zip Code)	97229		

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Charanjit Brahma	46574	Keyvan Davoudian	47520	James M. Wakely	48597	Joel B. German	48676

(1) INVENTOR'S SIGNATURE:

Kishore	K.	CHAKRAVORTY
First	Middle Initial	Family Name
Residence	San Jose	California
City	State/Foreign Country	Country of Citizenship
Post Office Address	6407 Berwickshire Way	
(include Zip Code)	95120	

(2) INVENTOR'S SIGNATURE:

Johanna	SWAN
First	Middle Initial
Residence	Scottsdale
City	State/Foreign Country
Post Office Address	19815 N. 84 <sup>th</sup> Way
(include Zip Code)	85255

FOR ADDITIONAL INVENTORS, "X" box ☐ and proceed on the attached page to list each additional inventor.  
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Atty. Dkt. No. PW 81674-249782  
(M#)

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(1) INVENTOR'S SIGNATURE:			
Brandon		C.	BARNETT
First		Middle Initial	Family Name
Residence	Beaverton	Oregon	USA
City		State/Foreign Country	Country of Citizenship
Post Office Address	10620 SW Oriole Circle		
(include Zip Code)	97007		

(2) INVENTOR'S SIGNATURE:				Date:
Joseph		F.	AHADIAN	
First		Middle Initial	Family Name	
Residence	Carlsbad	California	USA	
City		State/Foreign Country	Country of Citizenship	
Post Office Address	2327 Paseo Saucedal			
(include Zip Code)	92009			

(1) INVENTOR'S SIGNATURE:				Date:
Thomas		P.	THOMAS	
First		Middle Initial	Family Name	
Residence	Beaverton	Oregon	USA	
City		State/Foreign Country	Country of Citizenship	
Post Office Address	17337 NW Gold Canyon Lane			
(include Zip Code)	97006			

(2) INVENTOR'S SIGNATURE:				Date:
Ian			YOUNG	
First		Middle Initial	Family Name	
Residence	Portland	Oregon	Australia	
City		State/Foreign Country	Country of Citizenship	
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Charanjit Brahma	46574	Keyvan Davoudian	47520	James M. Wakely	48597	Joel B. German	48676

(1) INVENTOR'S SIGNATURE:

Date:

Kishore	K.	CHAKRAVORTY
First	Middle Initial	Family Name
Residence	San Jose	California
City	State/Foreign Country	Country of Citizenship
Post Office Address	6407 Berwickshire Way	
(include Zip Code)	95120	

(2) INVENTOR'S SIGNATURE:

Date:

Johanna		SWAN
First	Middle Initial	Family Name
Residence	Scottsdale	Arizona
City	State/Foreign Country	Country of Citizenship
Post Office Address	19815 N. 84 <sup>th</sup> Way	
(include Zip Code)	85255	

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Atty. Dkt. No. PW 81674-249782  
(M#)

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(1) INVENTOR'S SIGNATURE: B. C. B. A. Date: 4/23/02

Brandon	C.	BARNETT
First	Middle Initial	Family Name
Residence	Beaverton	Oregon
City	State/Foreign Country	Country of Citizenship
Post Office Address	10620 SW Oriole Circle	
(include Zip Code)	97007	

(2) INVENTOR'S SIGNATURE: \_\_\_\_\_ Date: \_\_\_\_\_

Joseph	F.	AHADIAN
First	Middle Initial	Family Name
Residence	Carlsbad	California
City	State/Foreign Country	Country of Citizenship
Post Office Address	2327 Paseo Saucedal	
(include Zip Code)	92009	

(1) INVENTOR'S SIGNATURE: Thomas P. Thomas Date: 5/14/02

Thomas	P.	THOMAS
First	Middle Initial	Family Name
Residence	Beaverton	Oregon
City	State/Foreign Country	Country of Citizenship
Post Office Address	17337 NW Gold Canyon Lane	
(include Zip Code)	97006	

(2) INVENTOR'S SIGNATURE: Ian A. Young Date: 5/14/02

Ian		YOUNG
First	Middle Initial	Family Name
Residence	Portland	Oregon
City	State/Foreign Country	Country of Citizenship
Post Office Address	3181 NW 114 <sup>th</sup> Terrace	
(include Zip Code)	97229	

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Howard A. Skaist	36008	Thomas Raleigh Lane	42781	W. Patrick Bengtsson	32456	Robert G. Winkle	37474
Charles K. Young	39435	Mark G. Paulson	30793	Jack S. Barufka	37087	Robin L. Teskin	35030
Dale S. Lazar	28872	Stephen C. Glazier	31361	Adam R. Hess	41835	Anthony L. Miele	34393
Glenn J. Perry	28458	Paul F. McQuade	31542	William P. Atkins	38821	Robert J. Walters	40862
G. Paul Edgell	24238	Richard H. Zaitlen	27248	Paul L. Sharer	36004	Jeffrey D. Karceski	35914
Roger R. Wise	31204	Joseph R. Bond	36458	Richard C. Calderwood	35468	Eric S. Chen	43542
Charanjit Brahma	46574	Keyvan Davoudian	47520	James M. Wakely	48597	Joel B. German	48676

(1) INVENTOR'S SIGNATURE:

Date:

Kishore		K.		CHAKRAVORTY	
First		Middle Initial		Family Name	
Residence	San Jose		California		USA
City		State/Foreign Country		Country of Citizenship	
Post Office Address		6407 Berwickshire Way			
(include Zip Code)		95120			

(2) INVENTOR'S SIGNATURE:

Date:

Johanna				SWAN	
First		Middle Initial		Family Name	
Residence	Scottsdale		Arizona		USA
City		State/Foreign Country		Country of Citizenship	
Post Office Address		19815 N. 84 <sup>th</sup> Way			
(include Zip Code)		85255			

FOR ADDITIONAL INVENTORS, "X" box ☐ and proceed on the attached page to list each additional inventor.

☐ See additional foreign priorities on attached page (incorporated herein by reference).

Atty. Dkt. No. PW 81674-249782

(M#)

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(1) INVENTOR'S SIGNATURE:

Date:

Brandon		C.	BARNETT
First		Middle Initial	Family Name
Residence	Beaverton	Oregon	USA
City		State/Foreign Country	Country of Citizenship
Post Office Address	10620 SW Oriole Circle		
(include Zip Code)	97007		

(2) INVENTOR'S SIGNATURE:

Date:

Joseph		F.	AHADIAN
First		Middle Initial	Family Name
Residence	Carlsbad	California	USA
City		State/Foreign Country	Country of Citizenship
Post Office Address	2327 Paseo Saucedal 7578 GIBRALTAR ST #5		
(include Zip Code)	92009		

(1) INVENTOR'S SIGNATURE:

Date:

Thomas		P.	THOMAS
First		Middle Initial	Family Name
Residence	Beaverton	Oregon	USA
City		State/Foreign Country	Country of Citizenship
Post Office Address	17337 NW Gold Canyon Lane		
(include Zip Code)	97006		

(2) INVENTOR'S SIGNATURE:

Date:

Ian			YOUNG
First		Middle Initial	Family Name
Residence	Portland	Oregon	Australia
City		State/Foreign Country	Country of Citizenship
Post Office Address	3181 NW 114 <sup>th</sup> Terrace		
(include Zip Code)	97229		



Please return signed/recorded to:  
Pillsbury Winthrop LLP  
Intellectual Property Group  
725 South Figueroa Avenue, Suite 2800  
Los Angeles, CA 90017-5406

Atty. Dkt. No.	PW 249782	P13702
	Attorney Ref.	Client Ref.

**ASSIGNMENT**  
**OF U.S. ORIGIN PATENT APPLICATION**  
**(to Corporation)**  
**(or Limited Partnership)**

WHEREAS, the undersigned, to wit:

Kishore CHAKRAVORTY, Johanna SWAN, Brandon BARNETT, Joseph AHADIAN, Thomas THOMAS  
and Ian YOUNG

(hereinafter ASSIGNOR), have made an invention known as Dkt. PW 249782

and entitled: A Fli-Chip Package Integrating Optical and Electrical Devices and Coupling to a  
Waveguide on a Board

for which an application for Letters Patent of the United States

☒ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;  
☐ was filed on \_\_\_\_\_, Appln. No. \_\_\_\_\_ / \_\_\_\_\_;

AND WHEREAS Intel Corporation (hereinafter ASSIGNEE), a corporation duly organized and existing under the laws of the State of Delaware and having its principal office and place of business at 2200 Mission College Boulevard, Santa Clara, CA 95054, desires to acquire an interest therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements that are disclosed in the application for the United States patent that has been executed by the undersigned prior hereto or concurrently herewith on the dates indicated below and is entitled A Flip-Chip Package Integrating Optical and Electrical Devices and Coupling to a Waveguide on a Board and in and to said application and all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said improvements; and in and to all rights of priority resulting from the filing of said United States application;

agree that said ASSIGNEE may apply for and receive a patent or patents for said improvements in its own name; and that, when requested, without charge to, but at the expense of, said ASSIGNEE, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions and all other patent applications on any and all said improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said ASSIGNEE, its successors, assigns, and representatives all facts known to the undersigned relating to said improvements and the history thereof; and generally assist said ASSIGNEE, its successors, assigns, or representatives in securing and maintaining proper patent protection for said improvements and for vesting title

to said improvements, and all applications for patents and all patents on said improvements, in said ASSIGNEE, its successors, assigns, and legal representatives; and

covenant with said ASSIGNEE, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

**NOTE:** The undersigned hereby authorizes PILLSBURY WINTHROP LLP of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

Executed on the date(s) below indicated.

Each Inventor: Please Sign and Date Below:

5/21/, 2002  
Date

Kishore Kumar Chakravarty  
Name: Kishore CHAKRAVORTY

**Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:**

5/21/, 2002  
Date

Each Inventor: Please Sign and Date Below:

\_\_\_\_\_, 20\_\_\_\_  
Date

\_\_\_\_\_  
Name: Johanna SWAN

**Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_  
Date

**BEST AVAILABLE COPY**

Each Inventor: Please Sign and Date Below:

\_\_\_\_\_, 20\_\_\_\_\_  
Date Name: Brandon BARNETT

**Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_\_  
Date

Each Inventor: Please Sign and Date Below:

\_\_\_\_\_, 20\_\_\_\_\_  
Date Name: Joseph AHADIAN

**Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_\_  
Date

Each Inventor: Please Sign and Date Below:

\_\_\_\_\_, 20\_\_\_\_\_  
Date Name: Thomas THOMAS

**Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_\_  
Date

Each Inventor: Please Sign and Date Below:

\_\_\_\_\_, 20\_\_\_\_\_  
Date Name: Ian YOUNG

**Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_\_  
Date

Please return signed/recorded to:  
Pillsbury Winthrop LLP  
Intellectual Property Group  
725 South Figueroa Avenue, Suite 2800  
Los Angeles, CA 90017-5406

Atty. Dkt. No.	PW 249782	P13702
	Attorney Ref.	Client Ref.

**ASSIGNMENT**  
**OF U.S. ORIGIN PATENT APPLICATION**  
**(to Corporation)**  
**(or Limited Partnership)**

WHEREAS, the undersigned, to wit:

Kishore CHAKRAVORTY, Johanna SWAN, Brandon BARNETT, Joseph AHADIAN, Thomas THOMAS  
and Ian YOUNG

(hereinafter ASSIGNOR), have made an invention known as Dkt. PW 249782  
and entitled: A Fli-Chip Package Integrating Optical and Electrical Devices and Coupling to a  
Waveguide on a Board

for which an application for Letters Patent of the United States

☒ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;  
☐ was filed on \_\_\_\_\_, Appln. No. \_\_\_\_\_;

AND WHEREAS Intel Corporation (hereinafter ASSIGNEE), a corporation duly organized and existing under the laws of the State of Delaware and having its principal office and place of business at 2200 Mission College Boulevard, Santa Clara, CA 95054, desires to acquire an interest therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements that are disclosed in the application for the United States patent that has been executed by the undersigned prior hereto or concurrently herewith on the dates indicated below and is entitled **A Flip-Chip Package Integrating Optical and Electrical Devices and Coupling to a Waveguide on a Board** and in and to said application and all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said improvements; and in and to all rights of priority resulting from the filing of said United States application;

agree that said ASSIGNEE may apply for and receive a patent or patents for said improvements in its own name; and that, when requested, without charge to, but at the expense of, said ASSIGNEE, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions and all other patent applications on any and all said improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said ASSIGNEE, its successors, assigns, and representatives all facts known to the undersigned relating to said improvements and the history thereof; and generally assist said ASSIGNEE, its successors, assigns, or representatives in securing and maintaining proper patent protection for said improvements and for vesting title

to said improvements, and all applications for patents and all patents on said improvements, in said ASSIGNEE, its successors, assigns, and legal representatives; and

covenant with said ASSIGNEE, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

**NOTE:** The undersigned hereby authorizes PILLSBURY WINTHROP LLP of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

Executed on the date(s) below indicated.

**Each Inventor: Please Sign and Date Below:**

\_\_\_\_\_, 20\_\_\_\_  
Date Name: Kishore CHAKRAVORTY

**Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_  
Date

**Each Inventor: Please Sign and Date Below:**

5-6, 2002  
Date Name: Johanna SWAN *Johanna Swan*

**Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:**

5/6, 2002  
Date

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Each Inventor: Please Sign and Date Below:

\_\_\_\_\_, 20\_\_\_\_  
Date

Name: Brandon BARNETT

Inventor: Please also list the date that you signed the accompanying  
**DECLARATION AND POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_  
Date

Each Inventor: Please Sign and Date Below:

\_\_\_\_\_, 20\_\_\_\_  
Date

Name: Joseph AHADIAN

Inventor: Please also list the date that you signed the accompanying  
**DECLARATION AND POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_  
Date

Each Inventor: Please Sign and Date Below:

\_\_\_\_\_, 20\_\_\_\_  
Date

Name: Thomas THOMAS

Inventor: Please also list the date that you signed the accompanying  
**DECLARATION AND POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_  
Date

Each Inventor: Please Sign and Date Below:

\_\_\_\_\_, 20\_\_\_\_  
Date

Name: Ian YOUNG

Inventor: Please also list the date that you signed the accompanying  
**DECLARATION AND POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_  
Date



Please return signed/recorded to:  
Pillsbury Winthrop LLP  
Intellectual Property Group  
725 South Figueroa Avenue, Suite 2800  
Los Angeles, CA 90017-5406

Atty. Dkt. No.	PW 249782	P13702
	Attorney Ref.	Client Ref.

**ASSIGNMENT**  
**OF U.S. ORIGIN PATENT APPLICATION**  
**(to Corporation)**  
**(or Limited Partnership)**

WHEREAS, the undersigned, to wit:

Kishore CHAKRAVORTY, Johanna SWAN, Brandon BARNETT, Joseph AHADIAN, Thomas THOMAS  
and Ian YOUNG

(hereinafter ASSIGNOR), have made an invention known as Dkt. PW 249782

and entitled: A Fli-Chip Package Integrating Optical and Electrical Devices and Coupling to a Waveguide on a Board

for which an application for Letters Patent of the United States

☒ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;  
☐ was filed on \_\_\_\_\_, Appln. No. \_\_\_\_\_;

AND WHEREAS Intel Corporation (hereinafter ASSIGNEE), a corporation duly organized and existing under the laws of the State of Delaware and having its principal office and place of business at 2200 Mission College Boulevard, Santa Clara, CA 95054, desires to acquire an interest therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements that are disclosed in the application for the United States patent that has been executed by the undersigned prior hereto or concurrently herewith on the dates indicated below and is entitled **A Flip-Chip Package Integrating Optical and Electrical Devices and Coupling to a Waveguide on a Board** and in and to said application and all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said improvements; and in and to all rights of priority resulting from the filing of said United States application;

agree that said ASSIGNEE may apply for and receive a patent or patents for said improvements in its own name; and that, when requested, without charge to, but at the expense of, said ASSIGNEE, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions and all other patent applications on any and all said improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said ASSIGNEE, its successors, assigns, and representatives all facts known to the undersigned relating to said improvements and the history thereof; and generally assist said ASSIGNEE, its successors, assigns, or representatives in securing and maintaining proper patent protection for said improvements and for vesting title

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PW 249782/ P13702

to said improvements, and all applications for patents and all patents on said improvements, in said ASSIGNEE, its successors, assigns, and legal representatives; and

covenant with said ASSIGNEE, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

**NOTE:** The undersigned hereby authorizes PILLSBURY WINTHROP LLP of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

Executed on the date(s) below indicated.

<b>Each Inventor: Please Sign and Date Below:</b>	
_____, 20____ Date	_____ Name: Kishore CHAKRAVORTY

<b>Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:</b>
_____, 20____ Date

<b>Each Inventor: Please Sign and Date Below:</b>	
_____, 20____ Date	_____ Name: Johanna SWAN

<b>Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:</b>
_____, 20____ Date

Each Inventor: Please Sign and Date Below:

4-23, 2002  
Date

B. C. B. A.  
Name: Brandon BARNETT

Inventor: Please also list the date that you signed the accompanying  
**DECLARATION AND  
POWER OF ATTORNEY:**

4-23, 2002  
Date

Each Inventor: Please Sign and Date Below:

\_\_\_\_\_, 20\_\_\_\_  
Date

\_\_\_\_\_  
Name: Joseph AHADIAN

Inventor: Please also list the date that you signed the accompanying  
**DECLARATION AND  
POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_  
Date

Each Inventor: Please Sign and Date Below:

5/14, 2002  
Date

Thomas P. Thomas  
Name: Thomas THOMAS

Inventor: Please also list the date that you signed the accompanying  
**DECLARATION AND  
POWER OF ATTORNEY:**

5/14, 2002  
Date

Each Inventor: Please Sign and Date Below:

5/14/, 2002  
Date

Ian Young  
Name: Ian YOUNG

Inventor: Please also list the date that you signed the accompanying  
**DECLARATION AND  
POWER OF ATTORNEY:**

5/14, 2002  
Date

Please return signed/recorded to:  
Pillsbury Winthrop LLP  
Intellectual Property Group  
725 South Figueroa Avenue, Suite 2800  
Los Angeles, CA 90017-5406

Atty. Dkt. No.	PW 249782	P13702
	Attorney Ref.	Client Ref.

**ASSIGNMENT**  
**OF U.S. ORIGIN PATENT APPLICATION**  
**(to Corporation)**  
**(or Limited Partnership)**

WHEREAS, the undersigned, to wit:

Kishore CHAKRAVORTY, Johanna SWAN, Brandon BARNETT, Joseph AHADIAN, Thomas THOMAS  
and Ian YOUNG

(hereinafter ASSIGNOR), have made an invention known as Dkt. PW 249782  
and entitled: **A Fli-Chip Package Integrating Optical and Electrical Devices and Coupling to a  
Waveguide on a Board**

for which an application for Letters Patent of the United States

☐ was executed even date herewith and is about to be filed in the United States Patent and Trademark Office;  
☒ was filed on May 30, 2002, Appln. No. 10/158,250 ;

AND WHEREAS Intel Corporation (hereinafter ASSIGNEE), a corporation duly organized and existing under the laws of the State of Delaware and having its principal office and place of business at 2200 Mission College Boulevard, Santa Clara, CA 95054, desires to acquire an interest therein;

NOW, THEREFORE, for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the said ASSIGNOR, does hereby sell, assign and transfer unto ASSIGNEE, its successors, assigns and legal representatives, the entire right, title, and interest for the United States and all foreign countries, in and to any and all improvements that are disclosed in the application for the United States patent that has been executed by the undersigned prior hereto or concurrently herewith on the dates indicated below and is entitled **A Flip-Chip Package Integrating Optical and Electrical Devices and Coupling to a Waveguide on a Board** and in and to said application and all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions, and all other patent applications that have been or shall be filed in the United States and all foreign countries on any of said improvements; and in and to all original patents, reissued patents, reexamination certificates, and extensions, that have been or shall be issued in the United States and all foreign countries on said improvements; and in and to all rights of priority resulting from the filing of said United States application;

agree that said ASSIGNEE may apply for and receive a patent or patents for said improvements in its own name; and that, when requested, without charge to, but at the expense of, said ASSIGNEE, its successors, assigns, and legal representatives, to carry out in good faith the intent and purpose of this Assignment, the undersigned will execute all divisional applications, continuation applications, continued prosecution applications, continuation-in-part applications, substitute applications, renewal applications, reissue applications, reexaminations, extensions and all other patent applications on any and all said improvements; execute all rightful oaths, assignments, powers of attorney, and other papers; communicate to said ASSIGNEE, its successors, assigns, and representatives all facts known to the undersigned relating to said improvements and the history thereof; and generally assist said ASSIGNEE, its successors, assigns, or representatives in securing and maintaining proper patent protection for said improvements and for vesting title

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to said improvements, and all applications for patents and all patents on said improvements, in said ASSIGNEE, its successors, assigns, and legal representatives; and

covenant with said ASSIGNEE, its successors, assigns, and legal representatives that no assignment, grant, mortgage, license, or other agreement affecting the rights and property herein conveyed has been made to others by the undersigned, and that full right to convey the same as herein expressed is possessed by the undersigned.

**NOTE:** The undersigned hereby authorizes PILLSBURY WINTHROP LLP of the above address to insert hereon any further identification necessary or desirable for recordation of this document.

Executed on the date(s) below indicated.

<p><b>Each Inventor: Please Sign <u>and Date</u> Below:</b></p> <p>_____, 20____ Date                      Name: Kishore CHAKRAVORTY</p>	<p><b>Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:</b></p> <p>_____, 20____ Date</p>
<p><b>Each Inventor: Please Sign <u>and Date</u> Below:</b></p> <p>_____, 20____ Date                      Name: Johanna SWAN</p>	<p><b>Inventor: Please also list the date that you signed the accompanying DECLARATION AND POWER OF ATTORNEY:</b></p> <p>_____, 20____ Date</p>

Each Inventor: Please Sign and Date Below:

\_\_\_\_\_, 20\_\_\_\_  
Date Name: Brandon BARNETT

**Inventor: Please also list the date that you signed the accompanying  
DECLARATION AND  
POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_  
Date

Each Inventor: Please Sign and Date Below:

8/13, 2002 \_\_\_\_\_  
Date Name: Joseph AHADIAN

**Inventor: Please also list the date that you signed the accompanying  
DECLARATION AND  
POWER OF ATTORNEY:**

8/13, 2002  
Date

Each Inventor: Please Sign and Date Below:

\_\_\_\_\_, 20\_\_\_\_  
Date Name: Thomas THOMAS

**Inventor: Please also list the date that you signed the accompanying  
DECLARATION AND  
POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_  
Date

Each Inventor: Please Sign and Date Below:

\_\_\_\_\_, 20\_\_\_\_  
Date Name: Ian YOUNG

**Inventor: Please also list the date that you signed the accompanying  
DECLARATION AND  
POWER OF ATTORNEY:**

\_\_\_\_\_, 20\_\_\_\_  
Date

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